

47. (Withdrawn) The method of claim 45 wherein the oxidation step is carried out using a plasma reactor.

48. (Withdrawn) The method of claim 47 further comprising treating the surface of the nanoparticle with a bio-compatible surface agent comprising silicon tetrachloride.

49. (Withdrawn) The method of claim 45 further comprising collecting the nanoparticle with an electrostatic filter.

50. (Withdrawn) A method for making a magnetically responsive nanoparticle comprising:

forming a precipitate by mixing a magnetic metal salt and an alkaline media;

collecting the precipitate using a magnetic field; and

drying the precipitate.

51. (Withdrawn) The method of claim 50 wherein the magnetic metal salt comprises a mixture of magnetic metal salts comprising ferric chloride and ferrous chloride at a ratio of between 2 to 1 and 10 to 1.

52. (Withdrawn) The method of claim 50 wherein the alkaline media comprises ammonium hydroxide.

53. (Withdrawn) The method of claim 50 further comprising washing the precipitate with a solvent.

54. (Withdrawn) The method of claim 50 wherein drying the precipitate further comprises heating the precipitate.

55. (Withdrawn) The method of claim 50 further comprising the steps of:

dispersing the precipitate in alkaline media; and

reacting the precipitate with sodium silicate.

56. (Currently Amended) A magnetically responsive nanosphere comprising a plurality of magnetically responsive nanoparticles and having a bio-compatible shell, the nanosphere is prepared by a process comprising:

5 atomizing a nanodispersion to produce an aerosol, wherein the nanodispersion comprises a sodium silicate and a plurality of magnetically responsive nanoparticle nanoparticles, each nanoparticle having a magnetic moment, and sodium silicate; and

10 passing the aerosol, containing the plurality of magnetically responsive nanoparticles through a magnetic field to align the magnetic moments of the nanoparticles; and

drying the aerosol in a heated chamber ~~atomized nanodispersion in a magnetic field.~~

57. (Currently Amended) The nanosphere of claim 56 wherein the ~~nanosphere~~ comprises a plurality of magnetically responsive nanoparticles are encapsulated within the bio-compatible shell.

58. (Original) The nanosphere of claim 57 wherein the nanoparticles comprise magnetite.

59. (Original) The nanosphere of claim 56 further comprising at least a therapeutic contained within the bio-compatible shell.

60. (Original) The nanosphere of claim 59 wherein the therapeutic further comprises an erodable matrix.

61. (Original) The nanosphere of claim 56 wherein the bio-compatible shell comprises an outer surface and wherein the nanosphere further comprises at least one cell adhesion factor supported on the outer surface of the bio-compatible shell.

62. (Currently Amended) The nanosphere of claim 56 wherein the nanoparticles are nanoparticle is superparamagnetic.

63. (Currently Amended) A magnetically responsive nanosphere comprising at least one magnetically responsive nanoparticle and having a bioerodable shell, the nanosphere is prepared by a process comprising:

atomizing a dilute solution comprising magnetically responsive nanoparticles to
5 form an aerosol a droplet, wherein the aerosol comprises a plurality of droplets comprising dilute solution comprises at least one magnetically responsive nanoparticle; a solvating media, and a bioerodable polymeric material, wherein each nanoparticle comprises a magnetic moment; and
passing the aerosol through a magnetic field to align the magnetic moments of the
10 nanoparticles; and
drying the droplet in a heated chamber ~~magnetic field~~ to remove the solvating media.

64. (Original) The nanosphere of claim 63 wherein the nanoparticle is comprised of magnetite.

65. (Original) The nanosphere of claim 63 wherein the dilute solution comprises a plurality of single domain magnetically responsive nanoparticles having uniformly aligned magnetic moments.

66. (Original) The nanosphere of claim 63 wherein the nanoparticle is superparamagnetic.

67. (Withdrawn) A nanosphere having a diameter of less than 300 nanometers, the nanosphere comprising:

a plurality of single domain superparamagnetic magnetite nanoparticles having uniformly aligned magnetic moments;

5 a shell encapsulating each of the plurality of the nanoparticles; and

an outer bio-compatible shell encapsulating the nanoparticles.

68. (Withdrawn) The nanosphere of claim 67 wherein the shell encapsulating each of the plurality of the nanoparticles comprises collagen.

69. (Withdrawn) The nanosphere of claim 67 further comprising:

a bioerodable polymer matrix contained within the outer bio-compatible shell; and

a therapeutic contained within the bioerodable polymer matrix.

70. (Withdrawn) The nanosphere of claim 67 wherein the shell encapsulating each of the plurality of nanoparticles comprises silica.

71. (Withdrawn) The nanosphere of claim 70 wherein the outer bio-compatible shell encapsulating the nanoparticles further comprises at least a cell adhesion factor.